
Integrity - Service - Excellence

WMD ER Program Update

Part I: Medical Update



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Introduction

- **WMD ER MEFPK**
- **Drivers**
 - **Program origination**
 - **Doctrine**
- **Present status - Doctrine, Equipment, Training**
 - **886A - Patient Decon**
 - **886B - Lab Response Team**
 - **886C - Immediate Medical Response**
 - **886E - Pharmaceutical**
- **Exercises**
- **Other FY04/05 Efforts/Initiatives**



MEFPAK Role in HLD

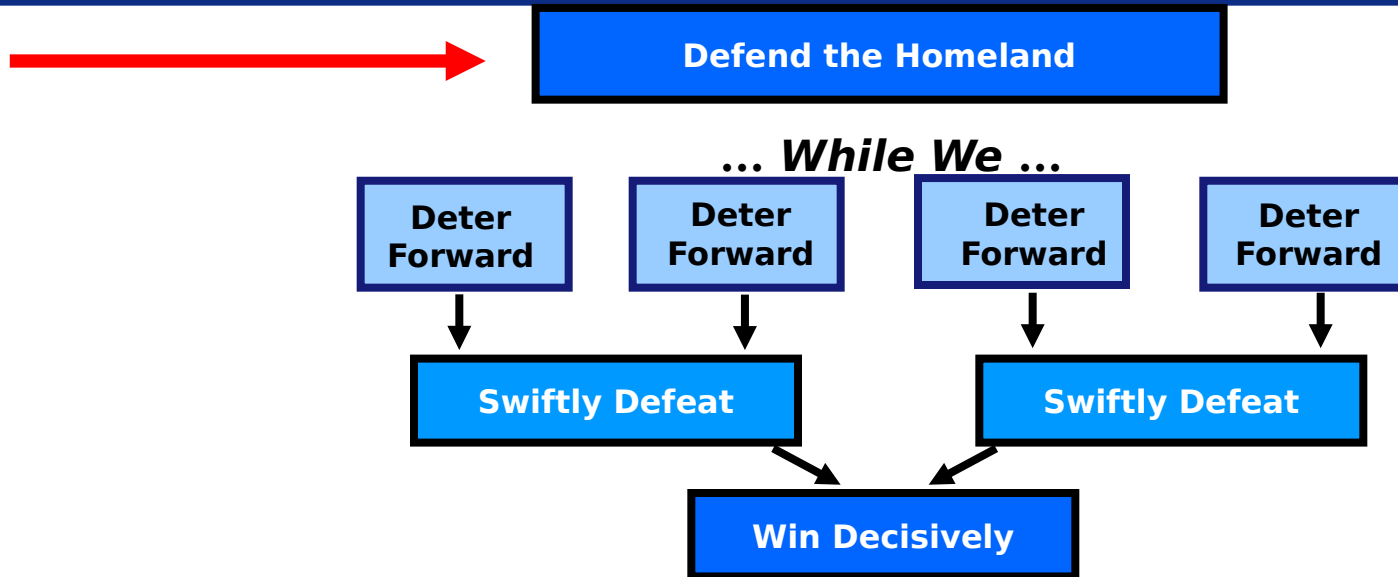
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- **Manpower and Equipment Force Packaging (MEFPAK)**
Oversee development of MANFOR/LOGFOR, allowance standards, and tactics, techniques, and procedures
- **ACC/SG is the MEFPAK for WMD Program (AF/SG ltr 8 Jul 02)**
- **ACC/SGPB is OPR**
 - **Draft WMD CONOPs**
 - **Register allowance standards**
 - **Identify manpower and training requirements**
 - **Establish an inspection/audit trail**
- **Existing pilot programs: Test CONOPs, equipment, training**
- **ACC/SGPB acts as AF lead by coordinating program initiatives with MAJCOMs, AFCESA, AFIOH, and Air Staff**



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Drivers



QDR Guidance... “The **highest priority** of the US military is to **defend the Nation** from all enemies”

“Our first priority is to protect the US.” - 2004 NMS



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AFMS Response Capabilities

- **Procured Materiel in FY03; being delivered throughout FY04**
 - **Aug 99 - Dec 01 SECDEF PDM 1 and PBD 289**
 - **Jan 02 PBD 736 Added \$42.7M to FY03**
- **Training and exercises: FY04-FY05**
 - **\$9.6M GWOT in FY04**
- **CONOPS: Installation/Local response, 1st 24 hours, 300 patients**
 - **Patient Decontamination (886A)**
 - **Laboratory Response (PCR technology) - at 52 bases (886B)**
 - **Immediate/Emergency Medical Response (886C)**
 - **Enhanced In Patient Capability - at 12 bases (886D)**
 - **Pharmaceutical Support (886E)**
 - **Threat Agent Surveillance (886H)**



Employment Options

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- **Prepare with community for integrated response**
 - Not always an “incident scene”
 - On/Off installation - MOU/MOA with community responders
- **Immediate Response On Base**
 - Response will be Bigger than on base resources
 - Need to look outside the gate vs. within service
- **Immediate Response Off Base**
 - When requested...unique assets...community partner
 - Example: Peterson AFB has MOU with Springs and Colorado



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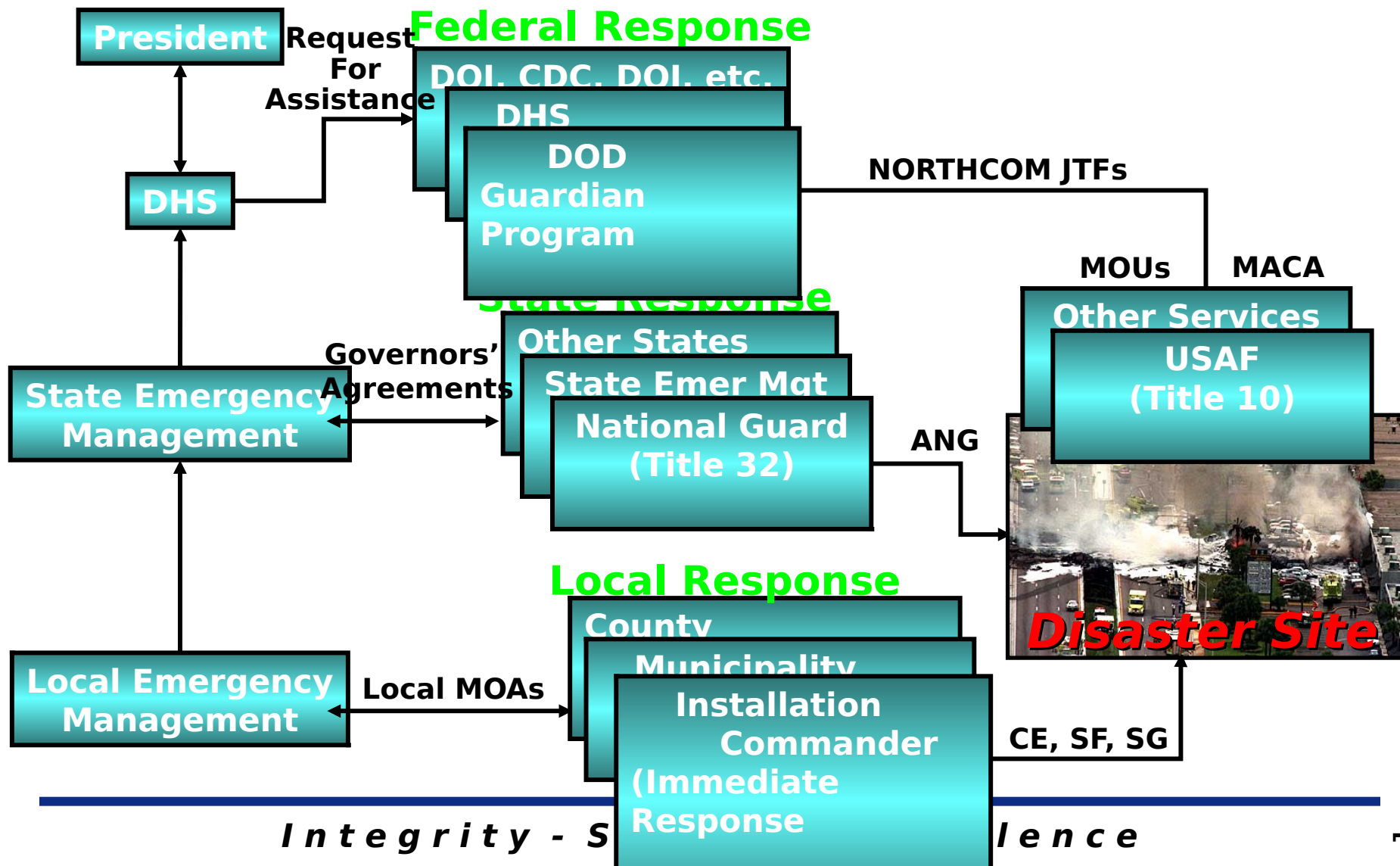
Deter, Prevent, Defeat

n c e



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Employment Options





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Doctrine

- **AFTTP 3-42.32: Home Station Medical Response to Chemical, Biological, Radiological, Nuclear, or High-Yield Explosives (CBRNE) Events - Capabilities-based Response** -- <https://www.afms.mil/sg/index.htm>
 - **Conduct Disease Surveillance**
 - **Vulnerability Assessments/ Intelligence**
 - **Capability Assessment**
 - **Maintain Response Equipment and Supplies**
 - **Recognize, Detect, and Identify CBRNE Agents**
 - **Secure/protect MTF and Personnel**
 - **Perform Health Risk Assessment and Communication**
 - **Triage CBRNE Casualties**
 - **Decontaminate Casualties at the MTF**
 - **Diagnose and Treat CBRNE Casualties**
 - **Integrate Response Effort with Follow-on Teams**

Casualty
Prevention

Casualty
Management



Major Active-Duty Air Force Installations

9



Patient Decontamination

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Description

- 2 Lane Expandable Tent
- Supplies: heater, bladder, litter roller, wet/dry vac, and medical accessories
- PPE: Level C with PAPRs
- Training: 2 Day course w/Tabletop exercise
- Operational in 10-20 minutes



■ AS 886A Issues

- Fire department decon inconsistent
- How clean is clean?
 - Simulants in training
- First Receivers - training, PPE certification
- Who is required to be trained?
 - Turn-over
- MDG appointment

Update

- FY05 training refresh
- Revised guidance/TTP, incorporating OSHA guidelines
- Decon pavillion pilot project: Offutt AFB, NE
- Add training PPE to AS



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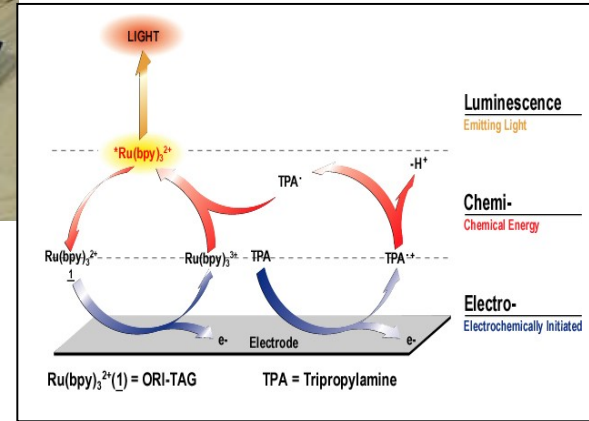


Clinical Laboratory

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Description

- Disease surveillance, biological threat agent identification to support operational decisions
- Polymerase Chain Reaction - 52 AFBs
- 14 pathogen assays
- Electrochemiluminescence - 24 AFBs
- 3 Toxin assays



- Issues
- Analyses of food/environmental
- Handling environmental samples in/out of medical facility
- Integration with Lab Response Network
- Prioritization of additional probe development efforts
- JBAIDS fielding plan and integration
- Field operational testing

Update

- Sep 04 fielding of M1M instruments
 - Integrate training with RAPID training
 - Future assay enhancements
- Sample collection/handling study
- Tailoring probe set to align w/threat and reducing expiration on the shelf
- Update/revising CONOPS/TTP
- Proficiency testing started in Jun 04

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Lab Response Team

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- Ruggedized Advanced Pathogen Identification Device (RAPID)
 - Polymerase Chain Reaction Technology
 - Identifies 14 Pathogens (Several Probes Each)
 - **Several More Under Development**
- Part of Lab Response Network
- 52 AFBs
- Tailored Set of Probes Based on Threat

BW Probes

Anthrax

Yersinia pestis

Francisella tularensis

Brucellosis

Variola

Glanders (B. mallei)

Alpha viruses

CCHF

Clinical Agents of Significance

Salmonella (2)

Streptococcus

pneumoniae

E. coli (2)

Vibrio cholera

Campylobacter species

Dengi, **West Nile Virus**

Shigella

Influenza



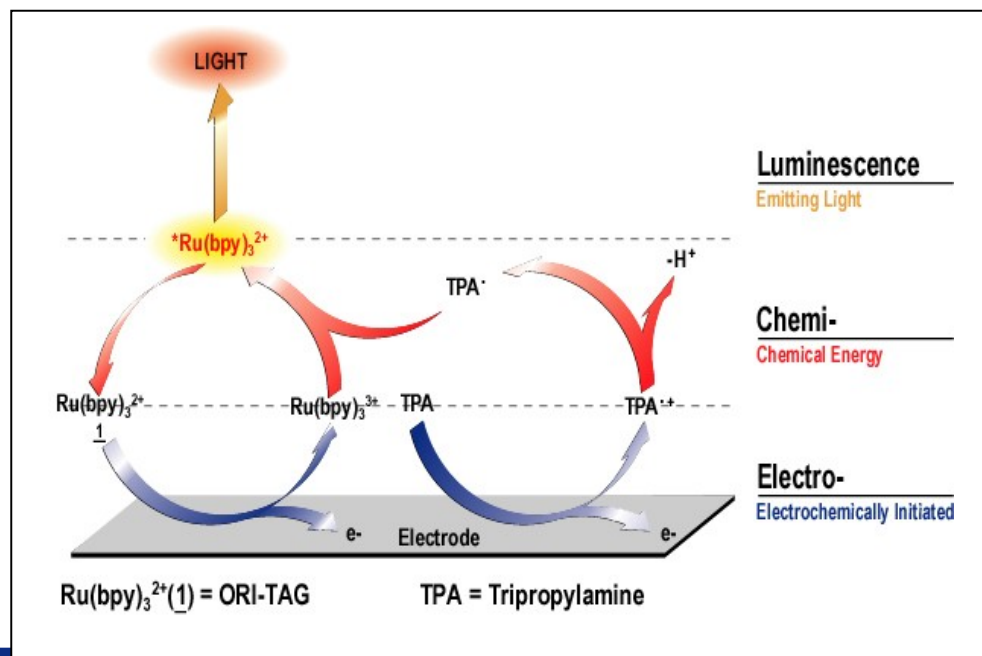
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Lab Response Team

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- **M1M: Electrochemiluminescence (ECL) - 24 AFBs**
- **Identifies Toxins and Pathogens**
- **Extremely low limit of detection**
- **Analysis in 15 minutes**
- **Complements RAPID, HHA**
- **Future:**
 - **DNA assays**
 - **Enzyme assays**
 - **RNA assays**
 - **Immuno assays**
- **Impact: multiple methods for identifying BWA**





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Patient Treatment

Description

- Medical supplies to treat 300 CBRNE casualties
- Supplements existing disaster teams with mobile supplies, PPE, and security
- ACLS Mannequins



Issues

- Requirements for PPE
- Posturing equipment for response
- Training and Exercises

Update

- FY05 Bag packing where requested
- FY05 Training and TTX AF-wide
- Revised/clarify employment guidance/TTP
- Adding training PPE to AS



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Pharmacy Support

Description

- Scalable package to prophylax/treat 300 CBRNE casualties for 24 hours
- 3 Increments
 - Clinic
 - Hospital
 - Counter radiological



Issues

- Suite of counter radiological drugs
 - FDA approvals for Radiogarse, etc.
- Mass prophylaxis plans lacking
- Integration with community plans for Strategic National Stockpile access

Update

- None



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Exercises

- **Decontamination Training TTX**
- **Immediate Medical Response Training TTX**
- **Texas A&M Engineering Extension (training, TTX, FLDX)**
- **Code Silver**
 - **Team building exercise**





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CODE SILVER

Objectives/Participants

- **Participants**
 - **Medical Disaster Team Chiefs - Medically centric**
 - **Installation IRE/DCG Representatives**
 - **Community Representatives**
- **Objectives - stress you without white flag!**
 - **Identify Plan Shortfalls/LIMFAC**
 - **Base records action points**
 - **Base prioritizes and works**
 - **Cultivate/Mature Relationships**
 - **Sustainment training tool left**
 - **Focus on consequence mgt**
- **Not focused specifically on exercising command and control**



No-Fault exercise, general issues compiled/forwarded



DoD Guardian Program

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- **Installation Training and Exercise Program (ITEP)**
- **Response equipment suite**
 - **Requirements, specific equipment set, CONOPS...not clear yet**
 - **SGPB working w/AFMSA to transition from WMD to Guardian**
- **Funding for first two years through FY11, fenced**
- **SGPB position: Supplement existing capabilities, plus up any gaps, and execute exercises**
 - **AFMSA directing MAJCOMs to provide medical liaison for each installation exercise - 3 weeks per installation**

FY04 - Guardian Installations

WASHINGTON

- Ft. Lewis
- Naval Station Bangor

OHIO
Wright-Patterson AFB

MARYLAND
Andrews AFB

DC
The Pentagon

KENTUCKY
Ft. Campbell

OKLAHOMA
Tinker AFB

CALIFORNIA
Naval Station San Diego

NORTH CAROLINA
Ft. Bragg

VIRGINIA
• Langley AFB
• Naval Station Norfolk

TEXAS
Ft. Hood

GEORGIA
• Ft. Gordon
• Robins AFB
• Kings Bay Naval Base

FY05 - Guardian Installations

ALASKA

• Elmendorf AFB

WASHINGTON

- Naval Station Everett
- Naval Station Bremerton

CONNECTICUT

- Naval Submarine Base - New London

NEW JERSEY

- Ft. Dix

ILLINOIS

- Rock Island Arsenal

DC

- GSA
- Washington Naval Yard

COLORADO

• Peterson AFB

CALIFORNIA

• MCB Camp Pendleton

NEW MEXICO

• Holloman AFB

LOUISIANA

• Barksdale AFB

GEORGIA

• Ft. Benning

VIRGINIA

- Ft. Eustis
- Naval Air Station Oceana

HAWAII

- Ft. Shafter
- **Hickam AFB**
- Schofield Barracks & Wheeler AFB
- Naval Station Pearl Harbor

FLORIDA

- **Hurlburt Field**
- Naval Station Mayport

FY06 - Guardian Installations

WASHINGTON

- **McChord AFB**
- Naval Air Station Whidbey Island

CALIFORNIA

- Naval Weapons Station Seal Beach
- **Sierra Army Depot**
- Naval Base Coronado

NEW MEXICO

Kirtland AFB

ARIZONA

Davis-Monthan AFB
Luke AFB

MISSOURI

NIMA Arnold

NEBRASKA

Offutt AFB

KANSAS

Ft. Riley

TEXAS

Red River Army Depot

NEW YORK

Ft. Drum

WEST VIRGINIA

- Naval Security Group Activity Sugar Grove

NORTH CAROLINA

- MCB Camp Lejeune, NC/MCAS New River
- **Pope AFB**

ALABAMA

- Anniston Army Depot
- Redstone Arsenal

GEORGIA

Ft. Stewart

NEW JERSEY

- **McGuire AFB**
- Naval Weapons

Station Earle

MARYLAND

Ft. George G. Meade

WASHINGTON DC

- **DISA-WHCA-White House**
- Naval District-Wash

VIRGINIA

- **Ft. Belvoir**
- Naval Amphibious Base Little Creek

SOUTH CAROLINA

- MCAS Beaufort
- **Shaw AFB**

FLORIDA

- **MacDill AFB**
- Naval Air Station Jacksonville



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Other FY04 Initiatives - Doctrine, Management

- **Update AFTTP 3-42.32 with AS employment guidance (interim)**
 - **Integrating 7 CONOPS into one TTP**
- **PEM/POM: FY04 GWOT Initiative -- \$9.6M; \$25M POM over FYDP**
- **Cross-functional program reviews and audits (IG, HSI Criteria)**
- **Enhancing AFIOH and manufacture reachback support**
- **Lead ACC cross-functional WMD working group**
 - **Rewrite/draft AFIs: 10-2503, 10-2501**
- **Equipment Optimization Projects - Leading multi-service effort**
 - **Contract oversight of \$2M projects to calibrate/enhance WMD equipment**
 - **Partnering with other agencies, services, coalition partners to develop international standards for CBRNE response**



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Other FY04 Initiatives - Training/Exercises

- **Training: Food security, Decon, HAPSITE, other equipment**
 - **Coordinating contracts and schedules with bases**
 - **Audit training to ensure consistency with overall program**

- **Immediate Medical Response (886C) training**
 - **Battelle/AFIOH developing course**
 - **One-day training and TTX for clinical team chiefs/alternates**

- **Continue Code Silver; 43 bases in CY03-04; 45 bases in CY05**
 - **Team with L-3 to design/facilitate TTXs at all AFBs**
 - **Piloting new scenarios Nov/Dec 04**

- **Implement proficiency testing (HAPSITE, HAZMAT ID, RAPID)**
 - **Established joint standard; oversight of results**



FY05 Efforts/Initiatives

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- **Food Vulnerability Assessment**
- **In-line water distribution monitoring**
- **Sustain existing equipment - team chiefs and medical logistics**
- **Forming UTCs - still investigate issues and benefits**
- **Future of Code Silver and Installation Training and Exercise Prgm**
- **Pilot unit support - Review/Update all TTPs and AS**
- **Decon pavilion evaluation and programming for future**
- **APOM**
- **Expand partnerships with other agencies/services**
 - **Joint Preventive Medicine Equipment Sub-Group**
 - **Product optimization**



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Part II: BEE Update and Metrics

- **BEE Integration into FSTR**
- **Threat Agent Surveillance update**
- **Optimization Efforts**
- **NIMS**
- **FSTR and Medical WMD ER Metrics**



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General Clarification of Roles

- **Reviewed 10-, 32-, 41-, and 48- series documents to identify vague/overlapping roles between BEE and CEX**
- **Incorporating clarification into 10-2503**
- **Aligning in-garrison and deployed responsibilities**
- **Eliminating distinction among N/B/C**
- **SGPB is OPR for hazard and health effects info**
- **CEX is OPR for incident management**
- **SGPB responsible for CCA Health Risk Assessment**
- **Monitoring: active sample collection, not hand-held DRI**



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Clarifying 10-2602 Deployed

Role ¹	CEX	SGPB	Other	Comment
Command and Control	X			Tables A3.1, A3.7, A3.8
Initial Detection	X²	x		Tables A3.1, A3.7, A3.8
Detection/Identification/Quantification		X		Tables A3.1, A3.7, A3.8
NBC Sample Plan Development ³	x	X		Table A3.1
NBC Sample Collection ³	x	X		Table A3.8
NBC Sample Handling/Packaging ³	x	X		Table A3.8
NBC Sample Preservation/Shipment ³	x	X		Table A3.8
De-MOPP Action	x	X		Table A3.8
Establish MTF Detection System	X	x		Table A3.1
Provide Detailed Assessments	X	x ⁴		Table A3.1



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Clarifying 10-2602 In-Garrison

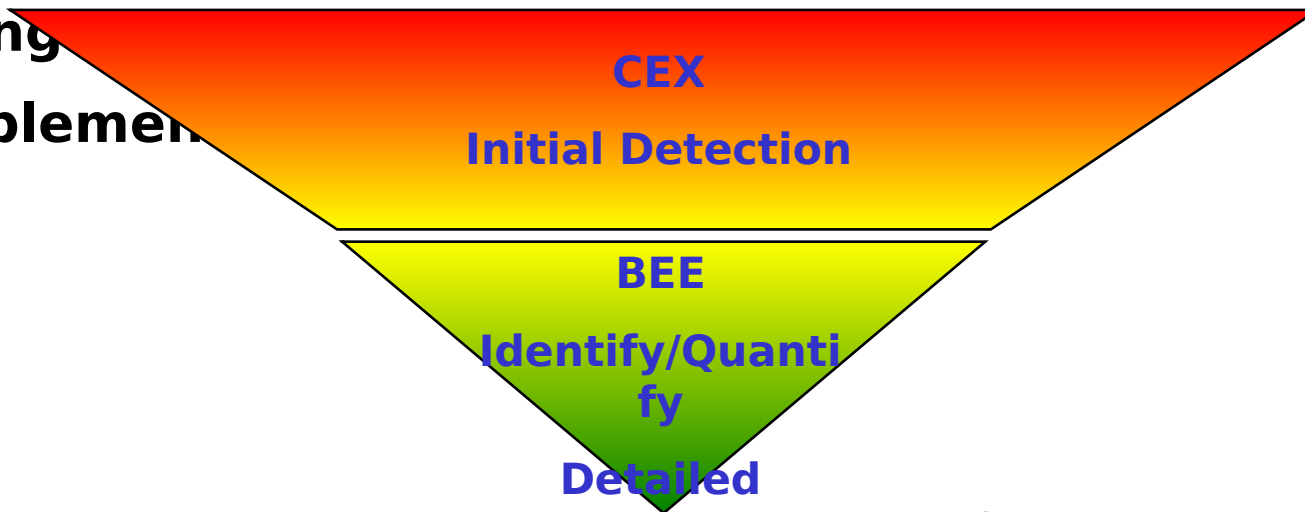
Role ¹	CEX	SGPB	Other	Comment
Command and Control	X			
Initial Detection	X²	x		
Detection/Identification/Quantification		X		
Response Support Agreements	X			
Monitoring		X		Defined ⁵
Radiation				Roles delineated ⁶
CCA Operations	X⁷	x ⁸		BEE Health Risk Assess.
Downwind Hazards / Toxic Corridors	X	x ⁹		BEE knowledge
Evacuation Plans	X	x		
HAZMAT/Waste Collection/Removal			X	CEV via contract
PPE		X		
IPE	X¹⁰	x		MOPP declaration



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Equipment

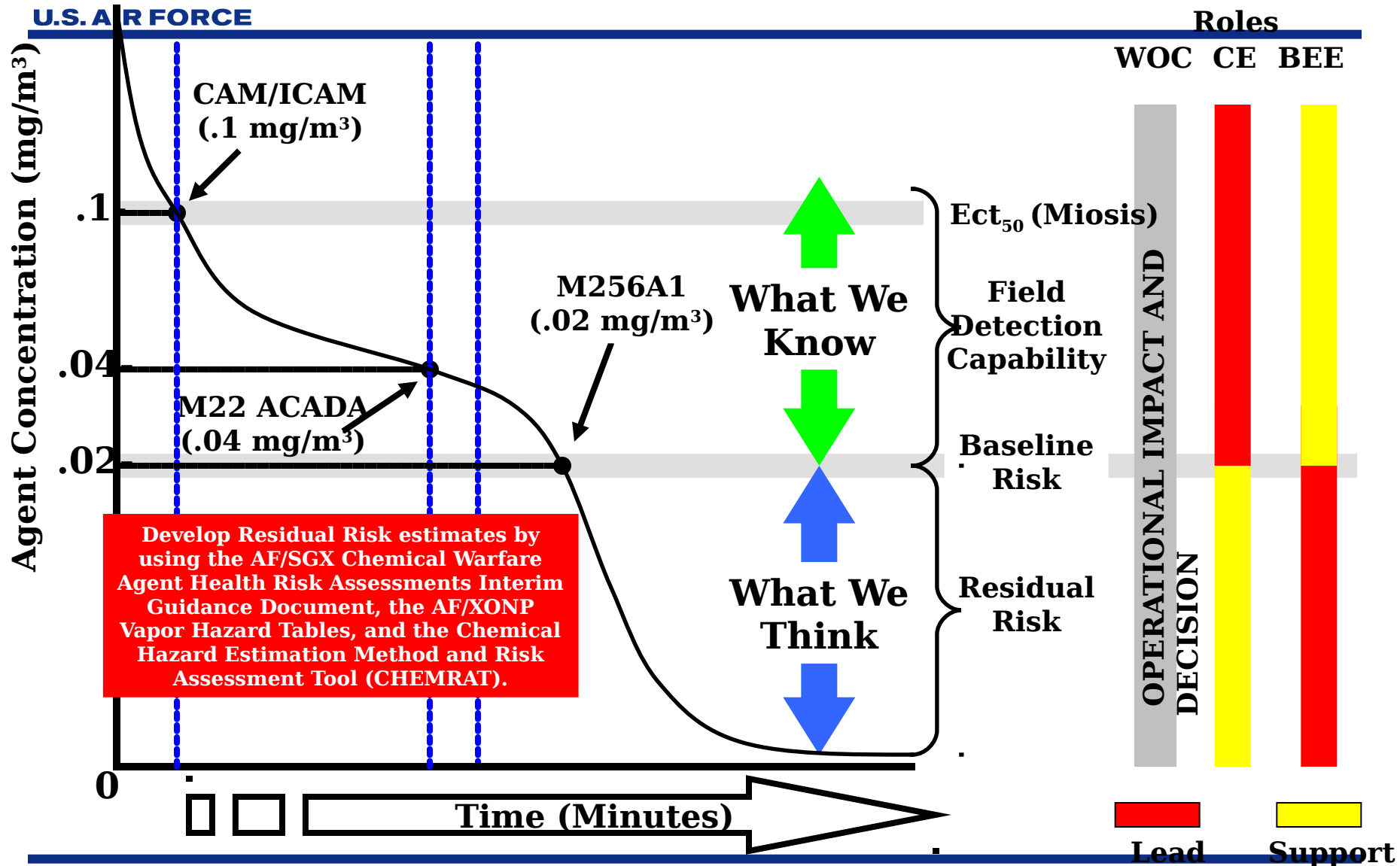
- **Standardizing In-garrison and deployed equipment sets**
 - **Minimize training, logistics tail**
 - **Allowance Standards: WMD ER Program, Medical NBC team**
- **Establishing joint training, TTPs, and proficiency testing**
- **Complement**





VX Vapor Detection Baseline* Analysis

*Does not address HAPSITE capabilities



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Partnering with your CEX

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- **Understand their mission - Health Risk Assessment**
 - **AFI 10-2501, AFI 10-2503 (draft)**
 - **Hang out with a CEX for a few hours**
- **Train together**
 - **At least quarterly**
 - **Equipment**
 - **Response/Deployment ops**
 - **Define key interfaces (information hand-offs)**
- **Exercise together (Code Silver, etc.)**
 - **In garrison**
 - **Deployed**
- **Identify CEX and BEE limitations**



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Full Spectrum CBRNE Threat Agent Surveillance

Description

- Provide identification and quantification of CBRNE hazards
- Rapid health risk assessment
- Enable operational decisions
- Partners with CEX (Initial detection and plume modeling)



Issues

- Interface with clinical laboratory; sample collection procedures
- Limitations of equipment
- Sustainment Training
- Resolving DLA contract shipping discrepancies

Update

- New methods, libraries, and guidance
 - Oversight on 3 multi-service contracts
- Fielding upgrades for HAPSITE
 - Refresh on basic HAPSITE training and some advanced training
- Implementing proficiency testing
- 1st update to AS underway

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BEE Update

- **886H Shipment Resolution...coming soon!**
 - **Thank Ed!**
 - **Overshipments being re-routed to Shortages**
 - **Lost in the Mail being reshipped**
 - **One Pallet...to the BEE direct**
- **Proof of Delivery (PODs)**
 - **Ask your loggies**
 - **Address with CC**
 - **Guidance should be coming if unresolved**



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BEE Update

- **886H Revisions and updates**
 - Sampling vials, IATA container, LED headlamps, Evidence tape, etc.
 - Looking into HAZTECH systems WMD kit and wireless COM
 - Critical item codes
- **Guidance: 886H Employment guidance >>> AFTTP 3-43.32 rev**
 - Possible template MCRP annexes w/essential items
- **Training**
 - HAPSITE basic course coming to you in FY05
 - HAPSITE advanced course: 2 per base, prerequisites
 - HAZCAT and SAM935 ...let me know if you are interested
- **Exercises**
 - Code Silver: 8 ACC bases
 - ITEP (Guardian): Langley, Barksdale, Holloman



Optimization Efforts

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- **HAPSITE upgrade with SMART software and extended service**
- **HAZMATID bio-library: T2, strichnine, aflotoxin, anthrax spore, *ricin, botox***
- **Proficiency testing: quarterly**
 - **HAPSITE, HAZMATID, soon will add SAM935**
- **HAPSITE tribed concentrator, 90+calibration curves, TIC methods**
- **HAZMATID, HAPSITE, XMX, SAM 935 CONEXs**

Ask me about in-line water monitors!



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THE JOINT PREVENTIVE MEDICINE EQUIPMENT SUB-GROUP (JPMESG)

- **Executive Members (Policy)**

- **Voting Members:**

- **USACHPPM**
 - **NEHC**
 - **HQ ACC/SGPB**

- **Extended Members (Technical)**

- **Voting Members:**

- **MARCORSYSCOM**
 - **PM WMD-CSS**
 - **NGB**
 - **AFIOH**
 - **NEPMU (2 & 5)**
 - **CBIRF**
 - **United States Army Medical Material Development Agency (USAMMDA)**
 - **US Army Forces Command**
 - **U.S. Army AMEDD C&S, Directorate of Combat and Doctrine Development**
 - **Joint Staff J-4, Medical Readiness Division**

- **Partners**

- **Non-Voting Members:**

- **USA Chem School**
 - **Brooks Schoolhouse**
 - **USCG National Strike Force**
 - **NNMC**
 - **USUHS**

- **Others**

- **Non-Voting Members:**

- **Porton Down**
 - **Canadian Forces**
 - **By special invitation (i.e. manufacturers, contractors)**



Equipment Optimization

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- **HAPSITE® Testing - Product enhancements:**
 - WMD-CST
- **HAPSITE® Optimization - Calibration curves:**
 - Marine Corps
 - Navy Environmental Health Center
- **HazMatID® Optimization - Toxins/Anthrax:**
 - Air Force
- **HAPSITE®/HazMatID® Course Curriculum Development**
- **Proficiency in Testing Quality Assurance Program (Proficiency Analytical Test (PAT) Rounds):**
- **USUHS Student Projects:**
 - Hapsite/SPME
 - Hapsite Transportability of Cal Curves Project
 - **HazMatID Pesticide Library Development**
 - Hach DR 4000 Project

• AF
• Navy

• AF
• Navy

• AF
• Navy

• AF
• CBIRF
• Navy
• NGB (CSTs)

• USAF
• USN
• USA

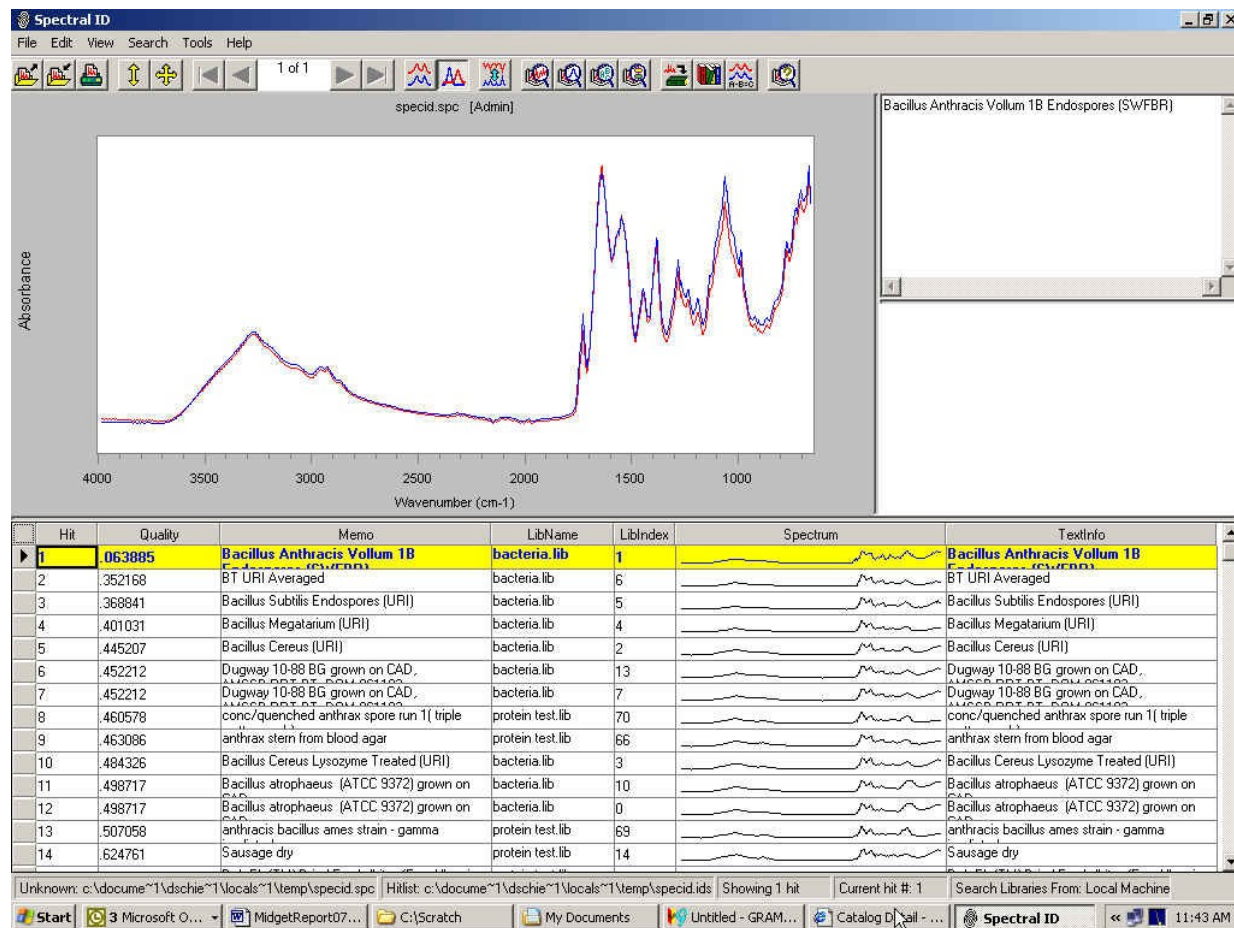
• FPAE
JSWG





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Bacillus Anthracis Vollum 1B Endospores IR Spectral Library Search Evaluation



**First Derivative
Normalized Dot Product
Search**

~30,000 spectra

23 samples

Scores =
.89123 ± .048

**Nearest Neighbor
Scores =
.65765 ± .049**

> 3 STD discrimination



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National Incident Management System

- **National Standards for Emergency Response**
 - **Equipment**
 - **Training**
 - **Certification**
- **DOD Adopting National Standards**
- **Air Force Medical Service**
 - **Anticipating, setting, and implementing**
 - **HAPSITE, HAZMATID, and RAPID proficiency testing**
 - **Adopting NFPA standards for PPE and medical response**
 - **Developing multi-service training products and standards**





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Metrics briefing



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Questions?

- **“Defending our nation against its enemies is the first and fundamental commitment of the Federal Government.” - NSS**
- **“Our enemies have openly declared that they are seeking weapons of mass destruction, and evidence indicates that they are doing so with determination.” - NSS**
- **“... the number of possible “wild cards” make it more likely that at least one of them will occur with disproportionately high consequences.” - 1997 National Military Strategy**
- **“The highest priority of the US military is to defend the Nation from all enemies.” - QDR**
- **“DOD must bolster its ability to work with the organizations involved in homeland security to prevent, protect against, and respond to threats to the territorial United States.” -- QDR**
- **“Our first priority is to protect the US.” - 2004 NMS**